



## AVIAN INFLUENZA

### Agent Overview:

The “avian influenza virus” refers to influenza A viruses found chiefly in birds, but infections with certain strains can occur in humans. Many different subtypes of type A influenza viruses exist. These subtypes are identified by specific proteins on the surface of the influenza A virus (hemagglutinin [HA] and neuraminidase [NA] proteins). There are sixteen known HA subtypes and nine known NA subtypes of influenza A viruses, with many different combinations of HA and NA proteins possible. Each combination represents a different subtype of the virus. Human illness has been documented from types H5, H7, and H9.

### Lab Specimen Submittal:

**Polymerase Chain Reaction (PCR) testing is available at Delaware Public Health Laboratory (DPHL) and will be performed by special request. DPHL will facilitate culture confirmation of Delaware suspect cases by CDC.**

Authorization by the DPHL Director or Deputy Director. Specimens for laboratory testing should be submitted to the DPHL only for patients who meet clinical and epidemiologic criteria. Testing for influenza A (H5N1) is indicated for hospitalized patients with:

- Radiographically confirmed pneumonia, acute respiratory distress syndrome (ARDS), or other severe respiratory illness for which an alternate diagnosis has not been established, **AND**
- History of travel within 10 days of symptom onset to a country with documented H5N1 avian influenza in poultry and/or humans. For a listing of H5N1-affected countries, see the World Health Organization web site at <http://www.who.int/en/>.

Testing for influenza A (H5N1) should be considered on a case-by-case basis in consultation with public health epidemiologists for hospitalized or ambulatory patients with:

- Documented temperature of  $>38^{\circ}\text{C}$  ( $>100.4^{\circ}\text{F}$ ), **AND**
- One or more of the following: cough, sore throat, shortness of breath, **AND**
- History of contact with domestic poultry (e.g., visited a poultry farm, household raising poultry, or bird market) or a known or suspected human case of influenza A (H5N1) in an H5N1-affected country within 10 days of symptom onset.

### Type of Specimens Necessary for Testing:

Call the DPHL at (302-223-1520) for information about laboratory testing and to coordinate the submission of specimens for analysis. SPECIMEN COLLECTION from hospitalized patients:

**Upper Respiratory:** nasopharyngeal aspirate, nasopharyngeal and oropharyngeal swabs.

**Lower Respiratory:** Bronchoalveolar lavage (BAL), tracheal aspirate or pleural tap.

### Packaging Instructions:

Clinical specimens must be in unbreakable double containers and outside of container decontaminated (10%).

### Receiving Specimens at DPHL:

Authorized specimens are accepted at the back of the building by the loading dock. Submitter must present identification and have proper forms completed.

### Handling of Specimens:

Specimens must be kept at refrigerator temperature (in a cooler, but not frozen) until delivered to the laboratory.

### Reporting Results:

Preliminary: A preliminary positive or negative test result is issued upon completion of PCR. PCR may take 4 to 24 hrs. However, all PCR results must be confirmed by culture at CDC.

### Contact Information:

DPHL Director, 302-223-1520 (24/7 coverage)